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# Integrating Motivational Interviewing with Brief Strategic Therapy for Heart Patients

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## Abstract

**Problem statement:** psychological distress, obesity and unhealthy lifestyles may contribute to a worse prognosis of cardiac diseases; an important public health challenge is to motivate people and facilitate health behavior change.

**Research question:** specifically, aim of the current study is to test the mediating effect of motivation in improving lifestyle changes in a long term. **Purpose of the study:** the MOTIV-HEART (MOTivational strategies for HEART patients) study, a two-arm randomized controlled clinical trial, compares the efficacy of an alternative-integrative brief motivational intervention (MI) with the cardiac rehabilitation programmed treatment - Brief Strategic Therapy (BST) - in order to develop interventions able to improve lifestyle change among heart patients. **Research method:** inpatients with Coronary Artery Disease (CAD) referred to a single clinical center for cardiac rehabilitation (CR) and weight loss treatment will be randomly allocated into two conditions: a) 3 sessions of BST, b) 3 sessions of BST combined with Motivational Interviewing (MI) techniques. Data are going to be collected at baseline, discharge (1 month after) and after 3, 6, 12 months follow-up. **Finding:** three kinds of outcomes are going to be relieved: behavioral, psychological and biomedical. Primary outcome is the improvement of patients' diet and physical activity at 3 months follow-up. Secondary outcomes are (a) the maintenance of healthy lifestyle habits, (b) the reduction of patients' body mass index (BMI) and specific cardiac parameters levels, (c) the improvement of adequate psychological outcomes. **Conclusion:** obese patients with cardiovascular diseases face numerous difficulties in achieving self-care. Motivational interviewing showed encouraging results in eliciting adoption of high-risk behavioral change, such as initiating an exercise regimen and changing diet. The rationale behind this investigation is that focusing on enhancing motivation would result in better outcomes than those brought about by existing therapy. Study is currently ongoing.

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**Keywords:** Brief Strategic Therapy (BST); Motivational Interviewing (MI); Coronary artery disease (CAD); Obesity.

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## 1. Background

Cardiovascular disease (CVD) is a significant cause of morbidity and mortality worldwide, accounting for 13% of general mortality and 32% of circulatory system deaths in Italy (Palmieri et al 2010).

Unhealthy diet, lack of physical activity and smoking status represent a challenge in contrasting the disease and there is increasing awareness that psychosocial attributes may act as mediators, and even directly as causal factors, for CVD (Neylon et al 2013)

Also, obesity in its own right is associated with an increased risk of heart attack representing, particularly among women, an independent predictor of CVD (Hubert et al 1983) through its influence on hypertension, hypercholesterolemia, insulin resistance, type 2 diabetes, glucose intolerance, left ventricular hypertrophy, and functional capacity (FC) (Sadeghi et al 2013). Generally, 80% of patients referring to cardiac rehabilitation (CR) program are overweight or obese (Gunstad et al 2007).

Because the etiology of obesity is largely multifactorial, effective interventions aimed at reducing weight, maintaining weight loss and working on related pathologies are typically combined treatment options (dietetic, nutritional, physical, behavioral, psychological, pharmacological, surgical) (Pietrabissa et al 2012). However, important difficulties have been underlined with regard to treatment adherence and interventions long-term efficacy. In fact, most overweight and obese individuals regain about one third of the weight lost with treatment within 1 year, typically returning to the baseline in 3 to 5 years (Castelnuovo et al 2011). Helping patients to change unhealthy behaviors undoubtedly represents one of the most challenging tasks faced by healthcare providers and this is particularly true for cardiac patients, which too often do not adhere to prescribed exercise (Brodie et al 2008) and diet programs.

Innovative and more effective strategies to promote healthy lifestyle changes are then urgently needed, with poor diet, physical inactivity and smoking habits being especially important behaviors to address (Ignarro et al 2007).

Such interventions can also improve patients' quality of life, which in turn has been demonstrated to be an important predictor of treatment adherence and physical functioning among older age groups over time (Brodie et al 2008, Elley et al 2003). Evidence to date specifically indicates the need for actions able to address patients' beliefs and concerns about their health status as well as to enhance confidence in their abilities to overcome barriers to adherence (Burke et al 1997, Miller et al 1997, Roter et al 1998). To this aim, Motivational Interviewing (MI) has obtained varying degrees of success in eliciting behavioral change (Kreman et al 2006), thus reducing the risk of CVD (Van Nes & Sawatzky 2010). It is defined as *collaborative, person-centered, goal-oriented conversation style designed to strengthen a person's own motivation and commitment to change by recognizing and resolving the discrepancy between present behavior and future personal goals and values exploring the individuals own reasons for change within an atmosphere of acceptance and compassion* (Miller & Rollnick 2013). This counseling approach suggests that for change in behavior to occur, the patient must be self-efficacious about his/her ability to make the change.

This paper describes the rationale of a randomized controlled clinical trial evaluating whether adding motivational interviewing principles and techniques to the usual care (Brief Strategic Therapy, BST), will enhance healthier behaviors among cardiac patients, sustaining life-style modifications in the long term.

## 2. Aim

The MOTIV-HEART (MOTIVational strategies for HEART patients) project compares the efficacy of an alternative-integrative brief motivational intervention (MI) with the cardiac rehabilitation programmed treatment Brief Strategic Therapy (BST). Hypothesis is that patients randomized to motivational interviewing compared to those in usual care will have: (i) greater change in both body mass index (BMI) and the medical outcomes considered (lipid profile, blood pressure and glucose level, if diabetic); (ii) greater rate of intrinsic motivation; (iii)

improvement in anxiety, depression and impulsivity as well as in both self-efficacy and quality of life at follow-up points.

### 3. Method

#### 3.1 Study design

Participants are randomized into two groups: *Control group* (BST): inpatient treatment (diet, physical activity, dietitian counseling) plus 3 individual sessions of Brief Strategic Therapy; *Experimental group* (BST+MI): inpatient treatment (diet, physical activity, dietitian counseling) plus 3 sessions of BST combined with Motivational Interviewing techniques (Emmons & Rollnick 2001). Sessions take place once weekly and last between 30 and 45 minutes. Due to structural needs, the same psychotherapist, specifically trained in BST delivers both treatments. Additionally, the professional has been previously prepared to implement MI by attending intensive 4-day workshop training. The quality of the application of motivational interviewing is assessed by specialists in the field, analyzing a purposive sample of sessions from different patients, and the therapist periodically receiving one-to-one clinical supervision with supplementary informal support throughout the study (Martino et al 2008). MI sessions are audio recorded and transcript verbatim.

#### 3.2 Participants

Inpatients referred to a single clinical center (Saint Joseph Hospital - IRCCS Istituto Auxologico Italiano) for attending cardiac rehabilitation, are sequentially recruited at the admission to the hospital.

*Inclusion criteria* for the study are: 1) being born after 1940; 2) having Italian nationality; 3) having BMI  $\geq 30$  (WHO criteria) or being a post-operative patient; 4) presenting cardiovascular diseases and 5) signing written and informed consent to participate. *Exclusion criteria* for the study are: 1) presenting cognitive or communication problems 2) having vision impairment which makes answering the questionnaire hard for them; 3) having uncorrected hearing impairment which anticipates difficulty with the intervention.

#### 3.3 Measures

Two kinds of outcomes are delivered: biomedical and psychological. Primary outcome is the reduction of patients' body mass index (BMI) as well as of their lipid profile (triglycerides and cholesterol), blood pressure and glucose level (patients with insulin dependent diabetes mellitus) level at 3 months after discharge. Secondary outcomes are (i) the maintenance or improvement of the previous parameters at 6 and 12 months; (b) the improvement of patients' cardiac related beliefs (i.e. illness representations, knowledge/misconceptions), intrinsic motivation and mood (anxiety, depression and impulsivity) as well as in both self-efficacy and quality of life over time. Body weight and height are measured without shoes using a calibrated balance beam scale and a wall-mounted stadiometer, respectively. BMI is calculated as weight in kilograms divided by the height squared in meters. Psychological outcomes are evaluated by the use of self-administered questionnaires at arrival, after discharge (c.a. 1 month after) as well as at 6 and 12 months follow-up through phone-sessions. The Italian validation of the following questionnaires is used: the *Illness Perception Questionnaire* (IPQ) (Giardini et al 2007, Hirani et al 2006) to assess the patients' cognitive and emotional representations of their heart disease; the *Hospital Anxiety and Depression Scale* (HADS) (Roberts et al 2001, Tesio et al 2014) and the *Barratt Impulsiveness Scale* (BIS-11) (Fossati et al 2001) measuring their anxiety, depression and impulsiveness level, respectively; the *General Self-Efficacy Scale* (GSE) (Zotti et al 2007), in order to assess patients' self-beliefs of coping with a variety of difficult demands in life and the *12-Item Short Form Health Survey* (SF-12) (Jakobsson 2007, Lim & Fisher 1999) as a measure of patient's quality of life. Also, the *Readiness Ruler* is used to help clarifying inpatients' perception of willingness and

confidence to change, as much as how important they feel to change is (Jakobsson 2007) and the *Treatment Self-Regulation Questionnaire* (TSRQ) (Levesque et al 2007) to assess the degree to which one's motivation for diet, exercise or stop smoking is relatively autonomous or self-determined. All these measures have good reliability, validity and acceptability in CR. Demographic information is obtained by self-report at baseline only.

#### **4. The Brief Strategic Therapy within a Cardiac Rehabilitation setting**

According to the strategic model a symptom persists due to the fact that the individual's attempts to solve the problem have repeatedly been ineffective, thus creating a vicious circle of maintenance of the problem.

Instead of looking at "why" the problem exists it is then of fundamental importance for the strategic therapist to understand "how" the problem functions in the present (Nardone & Portelli 2005). Each step of the therapy is adapted to the client's logic and language and adjusted according to the patient's reaction to specific techniques.

This problem solving procedure has led to progressively developing rigorous yet self-corrective protocols able to guide the professional to completely revolting the patient's perception of the problem itself (Nardone 2003, Nardone & Watzlawick 2005), then breaking the specific pathological rigidity (Nardone & Watzlawick 2005). Thus, the brief therapeutic intervention is engaged, on the one hand in eliminating dysfunctional symptoms or behaviors, and on the other, in producing changes in the way a person creates his/her own personal and interpersonal reality, guaranteeing permanent change. Fundamental is the use of the strategic dialogue (Nardone & Salvini 2007), a flexible and self-corrective communication technique which helps people to discover what they had been attempting to do so far trying to cope with difficulties representing something threatening and dangerous.

Cardiac patients typically attempt to avoid the likelihood of a new heart attack and to reduce the related fear, progressively decreasing physical effort and exercising. Besides, the imposed control on their eating habits typically magnifies the desire of "forbidden" food, leading to the disastrous result of losing control and overly eating, usually between meals, or "stuffing" themselves with food. Lack of physical activity and unhealthy diet understandably result in weight gain and increased obesity rates, leading to further medical complications. Pneumological and orthopedic impairments, in turn, constitute good reason for inactivity and the vicious cycle of maintenance of the problem results therefore created. The cardiac event usually brings the subject to deal with a series of transformations regarding the representation of the self. Also, psychosocial issues related to family, couple and sexual dimensions as well as regarding the individuals' social role, may arise. All these factors, often interrelated, understandably affect patients' attitude, behavior, and degree of compliance to treatments. Moreover, cardiac patients are generally elderly and hospitalized under suggestion of specialists, meeting demands of the family or following the example of friends.

Despite often showing resistance to change, at the same time heart patients express urgency of feeling better and to get effective and efficient results from the CR program. However, the successes achieved during the rehabilitation period often do not last long, with important consequences in terms of client's self-efficacy and self-esteem. By demonstrating ambivalence about change, the need of treatments able to "fit" the different patients' realities become evident. This is particularly true for those clients presenting personality disorders, psychological impairments (depression, anxiety, anger and hostility) and stressful life-style, which significantly contribute to both pathogenesis and expression of CVD emerging as recurring barriers to active self-care (Stawnychy et al 2013).

#### **5. Enhancing motivation to change among cardiac patients**

In clinical health psychology, several methods have been developed with the aim of favoring health behavioral change and preventing relapses. A particularly promising technique is represented by Motivational Interviewing (MI) (Beckie & Beckstead 2011, Bellg 2003, Bredie et al 2011, Brennan et al 2008, Everett et al 2008, Miller 2010, Miller 2012).

In contrast to the traditional medical approaches that rely on confrontation, education and authority (Riegel et al 2006), MI does not impose change (that may be inconsistent with the person's own values, beliefs or wishes); but rather supports change in a manner congruent with the person's own values and concerns.

A central concept of MI is the identification, examination, and resolution of ambivalence about changing behavior. Ambivalence is simultaneously wanting and not wanting something, or wanting both of two incompatible things (Anstiss 2009) and it is considered as a natural part of the change process. Therefore, it is normal when a person is ambivalent to hear two types of talk mixed together: *change talk*, the person's own statements that favor change, and *sustain talk*, the person's own arguments for not changing and sustaining the status quo (i.e. "I need to lose weight for my health [change talk] but I just love to eat [sustain talk]"). Most people who have had a heart attack are conscious they ought to quit smoking, exercise regularly, and eat more healthily, but other reasons conflict with such intentions.

Convincing or persuading the person to do the right thing, may precipitate in client resistance and poorer treatment outcomes than a warm and supportive listening. In fact, research demonstrates that gently and gradually helping patients to see how some of their current ways of being lead them away from, rather than toward, their eventual goals more effectively motivate and open people to change (Landry 1996). People are seen as experts of themselves and no one knows more about them than they do. Thus, priority is given to understand individuals' own perspectives on the situation, what is needed and how to accomplish it, and an empathic style has been shown to be particularly effective with clients who seem angry, resistant or defensive (Miller et al 1993).

To sum up, 1) *express empathy*, instead of convince or persuade the person to do the right thing. 2) *develop discrepancy* or gap between future goals and current behavior; 3) *roll with the patient's resistance* to change; and 4) *support* individual's self-efficacy represent the four underling principles of MI. Also, OARS is the acronym used to remember the core counselor behaviors employed to move forward the process of change: *Open Ended Questions*; *Affirmations* (assertion recognizing client strengths); *Reflective listening*; and *Summaries statements* (Miller & Rollnick 2012).

Specifically, reflective listening represents the main intervention for guiding the client toward change. It is hearing and understanding, and then paraphrasing the individuals' comments by repeating back what they said. Reflective listening deepens the conversation by allowing clients to hear again what they have said, thus clarifying their own thoughts. Professionals do not offer their perspective but carefully keep the focus on the other's needs or problems.

MI does not represent a mere set of techniques for counseling but a particular "way of being" with the client (Miller & Rollnick 1991). The "spirit" characterizing this approach is based on three key elements: 1) *collaboration* between the therapist and the client (Anstiss 2009); 2) *evoking* or *drawing out* the client's own ideas, arguments and barriers to change; and 3) emphasizing the *autonomy* of the client (Burke et al 1997, Miller et al 1997).

Trying to understand the client's perspective rather than to impose mainstream values or make quick judgments, motivational strategies emphasize the client's responsibility to voice personal goals and values as well as to select among options for change. People have their own strengths, motivations, and resources that are vital to be activated in order for change to occur as a self-change. In fact, research findings indicates that change is more likely to be long-lasting in patients who attribute their successes to their own efforts (Lambert & Bergin 1994) and the more someone talks about change, the more likely they are to change (Castelnuovo et al 2014). In fact, people learn about their own attitudes and beliefs in the same way that others learn them: by hearing themselves talk (Bem 1972).

Motivational Interviewing is complementary to and may even be synergistic with other treatment approaches (Hettrema et al 2005). Clinicians can use MI before, after or during other treatments (Anstiss 2009, Bien et al 1993, Noonan & Moyers 1997). While in the past treatments were frequently standardized and focused on clients' limitations, great attention is given today to their individual needs, and research studies have shown that flexible program policies are associated with better treatment outcomes (Inciardi et al 1993). In fact, people recovery with different levels of motivation (or readiness) to change, and CR constitute a valuable opportunity to meet and engage

with individuals.

By reinforcing clients' efforts and beliefs in their own capabilities (Yahne & Miller 1999) motivational approaches represent valuable tools for making the process of change more likely to be successful, while for helping people acquiring the cognitive, emotional or behavioral skills required to live more healthily, practitioners would be better switching to different psychological approaches (Baumann & Dang 2012). It is a way to interact with clients, not merely an adjunct to other therapeutic approaches. In fact, improving the quality of the clinician-patient interaction, additional benefit of MI may be due to increased levels of client engagement with and exposure to the effective elements of other treatments.

## 6. Conclusion

Traditional interventions for cardiac patients typically fail because of the patients' low compliance with clinical programs and adherence to treatment. To cope with this complication alternative-integrative psychological interventions are needed.

Research in the field have largely shown the effectiveness of BST in helping patients acquiring strategies for help themselves managing problems and difficulties.

Starting from the identification of the client's attempted solutions and the application of specific problem solving procedures, the strategic intervention is aimed at reversing the dysfunctional equilibrium that maintain the problem (Nardone 2003). Making the person to experience and to feel differently rather than providing education about the disorder, the client's perception about his/her own reality is subverted. Doing so, not only the efficiency but also the effectiveness of the intervention is maximized. Even using specific treatment protocols, every maneuver is always different but remains the same; in fact, it changes in its communicative way, but running the same strategic principles of problem solving. As G. Bateson (1984) stated "*Rigor alone leads to death due to asphyxia but creativity on its own is sheer folly*" (Nardone 2004).

However, because treatment is mainly focused on symptomatology instead of on specifically aimed at motivating people to change, it may be not very incisive with ambivalent and resistant patients when the objective is to help them changing unhealthy habits. During the inpatient phase persons are not exposed to food-temptations, they follow a balanced diet and are involved in physical activity on a daily basis. However, this new lifestyle is rarely maintained after discharge, independently from patients' psychopathology or emotional status. Moreover, being patients hospitalized, to apply some of the typical BST outpatients is not always possible. By the use of Motivational Interviewing clients' autonomy, self-efficacy and resources for change are mobilized, enhanced and supported, thus helping them to face everyday resistances and barriers. Also, the simplicity and universality of the concepts underlying motivational interventions permit allows a wide range of application and allow to reach clients characterized by many types of problems and belonging to different cultures or settings.

As part of the cardiac rehabilitation program, psychological interventions become relevant in so far as they represent significant contributions in achieving the goals of the treatment. Starting from carefully evaluating and defining the specific objective, fundamental is to build, together with the patient, a customized action in which he/she can take an active role, identifying and using individuals' personal resources. The aim is to help the client to actively reach a new satisfactory health condition.

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